

**Montana Board of Oil and Gas Conservation
Environmental Assessment**

Operator: Energy Corporation of America
Well Name/Number: ECA Hunt Creek 1-H
Location: NW NE Section 7 T8S R23E
County: Carbon, **MT;** **Field (or Wildcat)** Wildcat

Air Quality

(possible concerns)

Long drilling time: No, about 45 days total drilling time.

Unusually deep drilling (high horsepower rig): No, medium depth drilling with a double derrick or a small triple derrick drilling rig. Will drill a vertical pilot well to 9100' to allow evaluation and to cut cores; pending evaluation the well may be horizontally drilled to 6001' TVD/9654 MD in Mowry Formation.

Possible H₂S gas production: No H₂S anticipated.

In/near Class I air quality area: No.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under rule 75-2-211.

Mitigation:

☒ Air quality permit (AQB review)

☐ Gas plants/pipelines available for sour gas

☐ Special equipment/procedures requirements

☐ Other: _____

Comments: No special concerns – using a small triple or double derrick drilling rig. May drill a single lateral horizontal well to Mowry Formation. Limited quantities of associated gas can be flared under Board Rule 36.22.1220.

Water Quality

(possible concerns)

Salt/oil based mud: No, freshwater and freshwater/calcium mud system.

High water table: No high water table anticipated.

Surface drainage leads to live water: no, closest drainage is Silver Tip Creek, about 0.2 mile' to the West.

Water well contamination: No, closest water well in section 7 is about a mile NE (70' deep) closest water well outside sec 7 is about one mile to the south. Depth of the well to south is 160'. Surface casing hole will be drilled with freshwater/freshwater base drilling fluids to 450'. Steel surface casing will be run and cemented to surface from 450'. Main hole will be drilled with freshwater and freshwater based mud.

Porous/permeable soils: Yes, sandy loam, sandstone soils.

Class I stream drainage: no.

Mitigation:

☒ Lined reserve pit

☒ Adequate surface casing

☐ Berms/dykes, re-routed drainage

☐ Closed mud system

☒ **Off-site disposal of liquids (in approved facility) Oilfield Disposal**

Services in Wyoming.

☒ Other: Cuttings pit liner will be a 20 mil thickness impermeable liner.

Comments: 450' of steel surface casing cemented to surface adequate will adequately protect freshwater zones. Also, fresh water mud system to be used to drill surface hole, rule 36.22.1001. Production casing will be cemented. Reserve pit is proposed to be lined with a 20 mil synthetic liner. Cuttings will be buried in the lined pit after drying.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: No - No stream crossings to be constructed.

High erosion potential: No, flat area with about 2 feet maximum cut to build flat location.

Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, 300'X375' location size required.

Damage to improvements: Slight, surface use appears to be grazing

Conflict with existing land use/values: None.

Mitigation

☐ Avoid improvements (topographic tolerance)

☐ Exception location requested

☒ Stockpile topsoil

☐ Stream Crossing Permit (other agency review)

☒ Reclaim unused part of wellsite if productive

☐ Special construction methods to enhance reclamation

☐ Other: _____

Comments: Access will be over existing county road and existing ranch access road. Cuttings will be disposed of in the lined reserve pit. Drilling fluids will either be evaporated or trucked to a commercial SWD in Wyoming. Pit will be backfilled when dry. No special concerns.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Closest residence about 0.1 mile to the north The town of Belfry, Montana is about 2 1/4 miles to the west of this location. .

Possibility of H2S: Not likely.

Size of rig/length of drilling time: Double derrick or small triple derrick drilling rig/short amount of drilling time, estimate 45 days drilling time.

Mitigation:

☒ Proper BOP equipment

☐ Topographic sound barriers

☐ H2S contingency and/or evacuation plan

☐ Special equipment/procedures requirements

☐ Other: _____

Comments: Operational BOP (3,000 psig Annular or Double Ram) rule 36.22.1014 and adequate surface casing should mitigate any problems. Formations to be drilled are characteristically non H2S bearing. No concerns.

Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: none in immediate area

Creation of new access to wildlife habitat: No, all surface access is private land controlled.

Conflict with game range/refuge management: None. No game range/refuge nearby.

Threatened or endangered Species: 5 species of concern for this area. Species of Concern are the Greater Sage Grouse, Great Blue Heron, Ferruginous Hawk, Plains Spadefoot and Northern Redbelly Dace

Mitigation:

☐ Avoidance (topographic tolerance/exception)

☐ Other agency review (DFWP, federal agencies, DSL)

☐ Screening/fencing of pits, drillsite

☐ Other: _____

Comments: Private surface lands. Proposed well site is unlikely habitat for species of concern. The operator must consult with the surface owner as to land management issues if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over management of private surface lands.

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites: None identified.

Mitigation

☐ avoidance (topographic tolerance, location exception)

☐ other agency review (SHPO, DSL, federal agencies)

☐ Other: _____

Comments: Drilling location is on private surface lands. Although unlikely, there maybe possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve, salvage or mitigate such sites, if they are found during construction of the well site. The Board of Oil & Gas has no jurisdiction over privately owned cultural or historic sites or artifacts.

Social/Economic

(possible concerns)

☐ Substantial effect on tax base

☐ Create demand for new governmental services

☐ Population increase or relocation

Comments: No concerns, wildcat well.

Remarks or Special Concerns for this site

Well is a single lateral horizontal well to be drilled to the Mowry Formation.

Summary: Evaluation of Impacts and Cumulative effects

No significant impacts or cumulative effects are expected from the drilling of this test well. No long term impacts expected, since the drilling of this well would take a

maximum of about 45 days. Some short term impacts will occur, but can be mitigated in a relatively short time after drilling has been completed

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/Thomas Richmond
(title:) Administrator
Date: December 16, 2013

Other Persons Contacted:

Montana Bureau of Mines and Geology, Groundwater Information Center
(Name and Agency)
Stillwater and Carbon County water wells.
(subject discussed)
December 16, 2013
(date)

Natural Resources Tracker Website
(Name and Agency)

Species of concern
(subject discussed)
October 30, 2013

Montana Cadastral Website
(Name and Agency)
Surface Ownership and surface use, Aerial Photo
(subject discussed)

December 16, 2013
(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____